



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Olsen et al.

Confirmation No.: 5312

Serial No. 10/046,907

Art Unit: 2161

Filing Date: January 17, 2002

Examiner: Te Y. Chen

Title: METHOD AND SYSTEM FOR  
STORING AND PROCESSING HIGH-  
FREQUENCY DATA

Attorney Docket No: 060967-0004-US

**RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Notification of Non-Compliant Appeal Brief mailed July 1, 2009, applicant are submitting herewith revised section (v), Summary of the Claimed Subject Matter, in which paragraph numbers have been replaced by page and line number references and a revised Evidence Appendix removing pages 12 – 16 of Foundations of Computer Science.

In addition, a revised section (vii), Argument, has been submitted in which references to paragraph numbers at the bottom of page 5 have been replaced by references to page and line numbers and the reference to Foundations of Computer Science at the top of page 6 has been removed.

Respectfully submitted,

Date: November 2, 2009

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(v) Summary of claimed subject matter

Applicant's claims on appeal are directed to a system for processing time-stamped data from one or more time series. As stated at page 3, line 24 of applicants' specification, a time series is "a set of data points sorted in order of increasing time." Further, as set forth in the claims, the time series is time-stamped. Time-stamping is described at page 4, lines 22 - 26 and shown on the left-hand side of Fig. 1.

The claimed system includes one or more processing modules for processing time-stamped, time series data, one or more connections for linking the processing modules in a network, and a subsystem for activating the modules and moving data through the network.

As noted at page 1, lines 15 - 18 of the specification, financial time series data tends to be irregularly spaced as is also shown in the time-stamps of Fig. 1. As also noted at page 1, lines 18 - 22, such data also tends to be voluminous and not readily stored on conventional computers.

To overcome these problems, applicants have devised a language and a system to process time-stamped, time series data on a data flow basis. An overview of this system is set forth at page 13, line 17 to page 14, line 21. An example of the system is set forth in Fig. 9 and described at page 20, line 22 to page 21, line 28 and the table of C++ code incorporated at page 20, line 26 to page 21, line 12.

The exemplary system comprises several processing blocks. The Orla Read Ascii block of Fig. 9 reads Ascii data (page 20, lines 3 - 5), the Orla Project block extracts a Bid price (page 20, lines 22 - 25), the Orla EMA block computes an exponential moving average (EMA) (page 20, lines 16 - 17) and the Orla Print block generates an output (page 20, lines 6 - 8). As set forth at page 18, line 32 to page 19, line 13, each block may be thought of as a small processor or procedure and each block has input and/or output ports by which it is connected to other blocks

in a network. The blocks are the processing modules of paragraph (a) of claim 44. Examples of various other blocks are set forth at page 19, line 37 to page 20, line 21.

The blocks are interconnected through ports as more fully described at page 19, lines 14 – 36. The connection between an output port of one block and an input port of the next block is established by a binding operation described more fully at page 19, lines 33 – 36 and page 21, lines 15 – 20.. These elements constitute the connections for linking modules as recited in paragraph (b) of claim 44.

Finally, the system is managed by a network scheduler described at page 14, lines 13 - 17. The system is activated by the statement “net.run ( )” as described at page 21, lines 21 - 28. These elements constitute the subsystem for activating one or more processing modules and for moving data through the network as recited in paragraph (c) of claim 44.

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(vii) Argument

Langseth describes a personal intelligence network that delivers personalized information and transactional data from a database to individuals via e-mail, phone, PDAs or the like. As best shown in Fig. 2A, the system includes a variety of channels of information 40 that provide input to a data distribution system 42. The data distribution system outputs content either directly or through a variety of affiliates 202 using a variety of communication resources 22 such as the Internet, wireless communication and telephony. Fig. 2B provides more detail on the system.

A wide variety of content is contemplated for distribution by the Langseth system including sports information, business news, weather, travel information, financial information and a news channel.

At page 7 of the Office Action of March 2, 2006, the Examiner directs the applicants' attention in particular to the financial information described at Col. 3, lines 26-29 and that shown in Fig. 13 of Langseth. Col. 3, lines 26-29 describe a service that may be called "Market Update" that "sends an email to subscribers every day at 5 p.m. with a summary of the market results for the day." Fig. 13 appears to be similar. It is captioned "Daily Market Summary" and appears to show the closing prices, dollar change, high, low, volume and percent change for a group of stocks and two charts, one covering six days and the other seven months. Fig. 13 is described at Col. 6, lines 27-28 as a "facsimile output" and at Col. 22, lines 25-31 as a facsimile of a detailed chart.

Also in Langseth is a description at Col. 10, lines 9-51 of various types of services that might be provided over its financial channel. These services include moving averages, P/E ratios, earnings and a host of other financial data that can only be appreciated by reviewing the listing in Column 10.

With respect to the disclosure at Col. 3, lines 26-29, little information is given as to what is provided. It is merely characterized as "a summary of the market results." This could be in almost any format. No suggestion is given in this description that this information constitutes time series data or that such time series data is time stamped. Moreover, Col. 3, lines 26-29 merely describe the output of the financial service and do not describe what is processed by the financial service. Thus, this material provides no suggestion of a system for processing time-stamped, time series data as claimed by applicants.

Similarly, with respect to Fig. 13, which the Examiner describes as "an example of the claimed time series data," Fig. 13 merely shows a table of closing prices for

various stocks and two charts neither of which is explained. The set of closing prices does not constitute a time series because the closing prices are not sorted in the order of increasing time. As for the charts, they are not explained. But most important of all, the material of Fig. 13 is described as an output of Langseth's invention. This output does not teach or suggest what is provided to Langseth's system for processing and therefore does not teach or suggest applicants' system for processing time-stamped, time series data.

In the absence of any disclosure in Langseth of the input of time-stamped, time series data, there is no suggestion in Langseth of the system claimed in claim 44 which includes one or more processing modules for processing time-stamped, time series data. Moreover, there is no suggestion of the claimed connections for such modules or of a sub-system for activating such modules.

Accordingly, it is respectfully submitted that claim 44 is patentable.

Dependent claims 45-52, 55-66 and 84 are believed patentable for the same reason claim 44 is patentable. In addition, dependent claim 45 and claims 46-50, which are dependent thereon, are believed patentable for the additional reason that they specify that the system of claim 44 further includes a type system comprising one or more types and a relation among them.

The type system is described at page 18, lines 19 – 31; page 19, lines 14 – 36; and page 25, line 28 to page 34, line 5. Data is required to belong to a specific data-type and the processing blocks or modules specify what types of data they accept. As noted at page 26, lines 19 - 25, a grammar describes all valid types in the type system.

Applicants' usage of the terms "type" and "type system" is intended to be consistent with the usage of these terms in computer science.

While Langseth does use the word "type" at Col. 7, line 13, it is used in a general description of organizing information by relationships such as "subject matter, date, type, etc."; and nothing indicates that he is using the term in a technical fashion as applicants are using it. Accordingly, it is respectfully submitted that Langseth does not suggest a system for processing time-stamped, time series data that further includes a type system as recited in applicants' claim 45 and claims 46-50 which are dependent thereon.

(ix) Evidence Appendix

None